A NEW SPECIES OF THE GENUS NEOPANORPA WEELE FROM THE NANSEI ISLANDS (MECOPTERA)*

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Abstract

A new species of Mecoptera, *Neopanorpa subreticulata,* is described from Ishigaki-jima primarily based on the material taken by the junior author.

Neopanorpa subreticulata sp. nov.

Neopanorpa sauteri : Okamoto, 1976, nec Esben-Petersen, Gensei, Kochi (30) : 22, 2 figs. (Ishigaki-jima)

Size for males : Forewing length 9.9 -11.0 mm ; hindwing length, 9.0-10.0 mm. For a female : Body length ca. 9.0 mm ; forewing length, 11.5 mm ; hindwing length, 10.8 mm.

Body pale brown. Head brown, with ocellar area blackish brown and eyes dark brown. Thorax paler brown than head, with a blackish brown median stripe on each notum and with a pair of dark, oblique bands on antero-lateral sides of mesonotum. Abdomen of male brownish, with 2nd and 3rd tergites blackish brown, and 4th tergite and antero-lateral parts of dorsum of 5th and 6th segments dark; dorsal median process of 3rd tergite dark brown ; apical segments yellowish brown, with hypovalves dark brown. Abdomen of female brownish, with dorsum of 3rd to 7th segments dark brown and the remaining apical segments brown.

Wings (Fig. 1) narrow with the tips rounded, and tinged with yellow;

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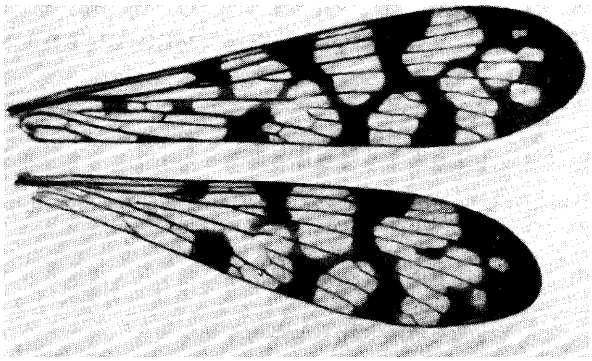
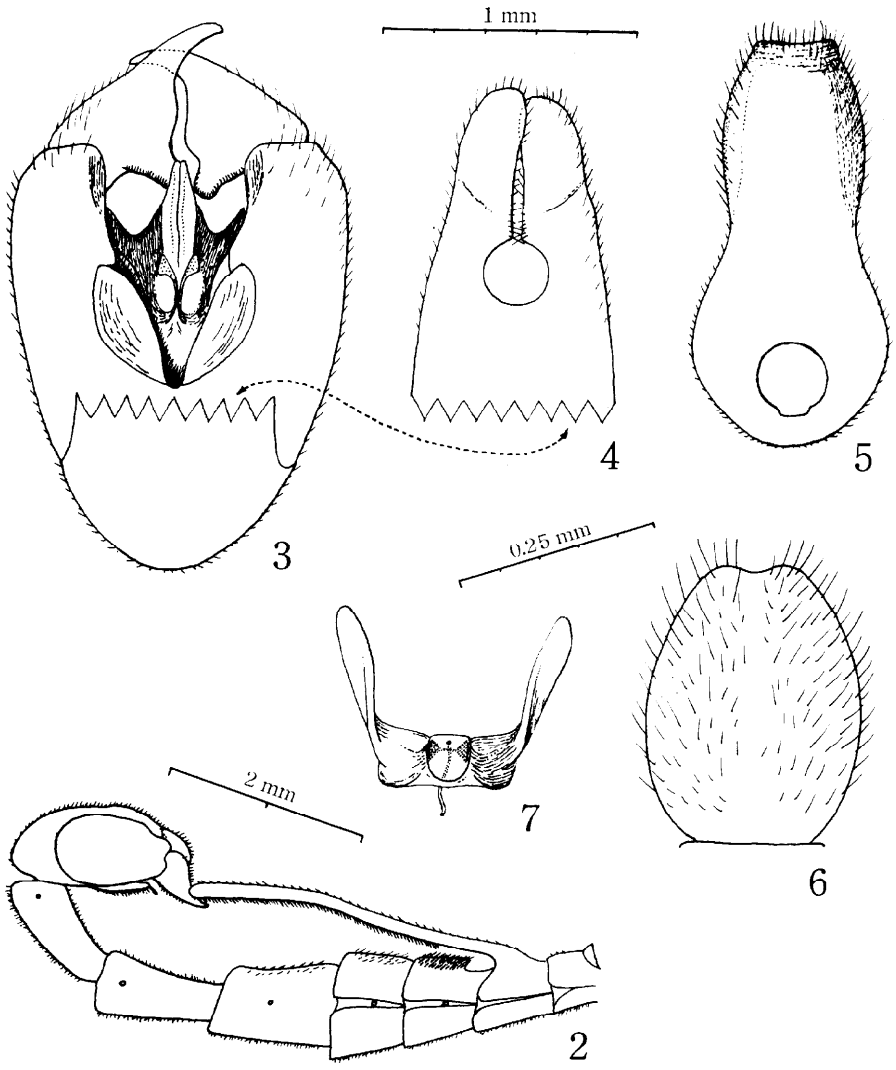


Fig. 1. Wings of *Neopanorpa* ***subreticulata*** sp. nov., allotype.

wing markings dark brown and somewhat reticulate. Marking pattern of forewing : pterostigmal band complete, with apical branch more or less broader than the basal one ; apical band enclosing 2 to 4 pale spots so as to form network; marginal spot of inverted Y-shape and its apical arm contiguous with basal branch of pterostigmal band; basal band (submedian band of Esben-Petersen) interrupted into 2 distinct spots; basal spot and 2 or 3 additional spots present. Markings of hind wing as in the forewing but less developed ; apical band embracing one large or 2 small spots; basal spot lacking.

Dorsal median process of 3rd abdominal tergite in male (Fig. 2) rod-like and very long (3.1 mm), extending to or beyond the middle of 7th abdominal segment; underside of the process covered densely with anteriorly directed, suberect, stiff hairs. Dorsum of the 4th segment tuberculate near base and covered with dense stiff hairs directed forwards; dorsum of 5th and 6th segments also furnished with anteriorly directed hairs. Fourth abdominal segment subequal in length to 3rd or 5th, and 6th to 8th segments subequal in length, respectively.

Male genitalia : Genital bulb (Fig. 3) rather thick; coxopodites with a whitish, brown, flap-like lobe on inner basal part; styles short and widened near base, with the outer margin somewhat concavely sinuate in middle, inner margin provided with a low, obtuse, median tubercle and a developed, tooth-like basal tubercle. Hypandrium (Figs. 3 and 4) long and broad; hypovalves extending well beyond the apex of coxopodites, with gently sinuate outer margin and round apex, and their apical parts overlapped with and the bases widely separated from each other. Parameres (Fig. 3) small and slender; their bases closed to each other, the apical parts divergent and each widened to a triangular form. Most parts of the parameres visible through the circular space between bases of hypovalves. Phallus (Fig. 3) simple, slightly long,



Figs. 2-7. *Neopanorpa subreticulata sp.* nov. *2:* Abdomen, seen from side, holotype (dried specimen). 3: Genital bulb, seen from ventral side, large part of hypandrium removed (alcoholic specimen). 4: The removed part of hypandrium. 5: Epiandrium. 6: Subgenital plate, ventral view, allotype (drawn after treated with hot causatic solution). 7: Internal skeleton, ventral view, same as above.

with lateral processes distinctly projected. Epiandrium (Fig. 5) with wavely sinuate margins, upper lateral sides curved ventrally and with the apex widely shallowly concaved.

Female genitalia: Subgenital plate (Fig. 6) broad, with the apex shallowly, roundly concaved. Internal skeleton (Fig. 7) simple and relatively broad; axial portion small, membranous, more or less oval in ventral view; arms of

distal plate widely separated from each other and divergent backward.

TYPE MATERIAL: Holotype male (Type No. 2152, Kyushu Univ.), Mt. Omoto, Ishigaki-jima, 20. V. 1975; allotype female, 20-29. V. 1975; 1 paratopotype male, in alcohol, 9. IV. 1974; 2 paratopotype males, 9. IV. 1979, all were collected by H. Makihara; 1 paratopotype male, 4. VI. 1977 (A. Nagatomi). The holotype, allotype and most of the paratypes are preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka.

DIAGNOSIS: The present new species is allied to N. *sauteri* Esben-Petersen but distinguished from the latter by the smaller size, the more developed and reticulate wing markings and the longer process of the 3rd abdominal tergite in the male; in the male genitalia, by the longer hypandrium, the overlapped hypovalves which have the round tips; in the female genitalia, by the relatively broader subgenital plate and the much wider internal skeleton, of which the axial portion is smaller and not triangular in ventral view. From N. *choui* Cheng (Sikang, China) this is easily separated by the 4th abdominal tergite of the male not extremely long and the genitalia different in structure in both sexes.